

IN THE CLAIMS:

1. (previously presented) A method for providing on-hold music in a telephony environment such as a PBX comprising the steps of:

providing a plurality of music generation engines in a telephony system, wherein each of the music generation engines generates music of a plurality of styles of music; wherein the music generation engines collectively can generate a plurality of styles of music;

receiving telephone calls from a plurality of users, wherein the plurality of users are placed on-hold by the telephony system;

providing one or more audio prompts to the one or more users, wherein the one or more audio prompts inform the one or more users of the plurality of styles of music that can collectively be generated by the music generation engines and commands that may be entered by the one or more users via one or more telephony tones to select a particular style of music as on-hold music;

detecting via the telephony system one or more first commands input by the one or more users;

based on the detected one or more first commands, selectively controlling the music generation engines to automatically compose on-hold music that is audibly provided to the one or more users;

wherein, in response to the one or more first commands entered by the one or more users, on-hold music of a particular style is selected by a particular user and the music generation engines are controlled so that one of the music generation engines generates via autocomposition on-hold music of the particular style selected by the particular user, wherein the on-hold music of the particular style selected by the user is modified based on one or more second commands entered by the particular user, wherein the music generation engines are controlled so that one of the music generation engines generates modified on-hold music of the particular style selected by the particular user based on the one or more second commands entered by the particular user.

2. (previously presented) The method of claim 1, further providing the step of controlling one of the music generation engines to generate music of an initial style,

wherein the initial style of music may be changed to a different style of music based on the one or more first commands or may be modified based on the one or more second commands.

3. (previously presented) The method of claim 2, wherein the initial style of music is predetermined by a configuration parameter of the telephony system.

4. (previously presented) The method of claim 2, wherein the initial style of music is determined at least in part based on caller ID information of a received telephone call.

5. (previously presented) The method of claim 2, wherein the initial style of music is determined at least in part based on the called party.

6. (previously presented) The method of claim 5, wherein the called party determines a particular style of music for the called party by a second configuration parameter of the telephony system.

7. (previously presented) The method of claim 2, wherein the initial style of music is determined at least in part based on time of day, week or year.

8. (previously presented) The method of claim 1, wherein, in response to the one or more second commands, the music of the particular style selected by the user is modified by changing one or more musical parameters associated with the music that is being generated.

9. (previously presented) The method of claim 8, wherein the one or more music parameters include volume, beat, pitch or filtering parameters.

10. (previously presented) The method of claim 1, wherein, in response to the one or more second commands, the music of the particular style selected by the user is modified by changing one or more musical parameters associated with one or more instruments of the music that is being generated.

11. (previously presented) A method for providing on-hold music in a telephony environment such as a PBX comprising the steps of:

providing one or more music generation engines in a telephony system, wherein each of the one or more music generation engines generates music of a plurality of styles of music, wherein the music generation engines collectively can generate a plurality of styles of music;

receiving one or more telephone calls from one or more users, wherein the one or more users are placed on-hold by the telephony system;

providing one or more audio prompts to the one or more users, wherein the one or more audio prompts inform the one or more users of the plurality of styles of music that can collectively be generated by the music generation engines and commands that may be entered by the one or more users via one or more telephony tones to select a particular style of music as on-hold music;

detecting via the telephony system one or more first commands input by the one or more users;

based on the detected one or more first commands, selectively controlling the one or more music generation engines to automatically compose on-hold music that is audibly provided to the one or more users;

wherein, in response to the one or more first commands entered by the one or more users, on-hold music of a particular style is selected by a particular user and the one or more music generation engines are controlled so that one of the music generation engines generates via autocomposition on-hold music of the particular style selected by the particular user, wherein the on-hold music of the particular style selected by the user is modified based on one or more second commands entered by the particular user, wherein the one or more music generation engines are controlled so that one of the music generation engines generates modified on-hold music of the particular style selected by the particular user based on the one or more second commands entered by the particular user.

12. (previously presented) The method of claim 11, further providing the step of controlling one of the music generation engines to generate music of an initial style, wherein the initial style of music may be changed to a different style of music based on the one or more first commands or may be modified based on the one or more second commands.

13. (previously presented) The method of claim 12, wherein the initial style of music is predetermined by a configuration parameter of the telephony system.

14. (previously presented) The method of claim 12, wherein the initial style of music is determined at least in part based on caller ID information of a received telephone call.

15. (previously presented) The method of claim 12, wherein the initial style of music is determined at least in part based on the called party.

16. (previously presented) The method of claim 15, wherein the called party determines a particular style of music for the called party by a second configuration parameter of the telephony system.

17. (previously presented) The method of claim 12, wherein the initial style of music is determined at least in part based on time of day, week or year.

18. (previously presented) The method of claim 11, wherein, in response to the one or more second commands, the music of the particular style selected by the user is modified by changing one or more musical parameters associated with the music that is being generated.

19. (previously presented) The method of claim 18, wherein the one or more music parameters include volume, beat, pitch or filtering parameters.

20. (previously presented) The method of claim 11, wherein, in response to the one or more second commands, the music of the particular style selected by the user is modified by changing one or more musical parameters associated with one or more instruments of the music that is being generated.

21. (previously presented) The method of claim 1, wherein the music generation engines generate on-hold music by executing program instructions, wherein one or more music composition algorithms are applied to song data in accordance with a song data structure to generate music output for a song.

22. (previously presented) The method of claim 21, wherein the song data structure includes at least one seed value, wherein the seed value is processed by a pseudorandom number generator routine.

23. (previously presented) The method of claim 22, wherein, based on the processing of the at least one seed value, musical data in accordance with the song data structure is provided for a complete song.

24. (previously presented) The method of claim 11, wherein the music generation engines generate on-hold music by executing program instructions, wherein one or more music composition algorithms are applied to song data in accordance with a song data structure to generate music output for a song.

25. (previously presented) The method of claim 24, wherein the song data structure includes at least one seed value, wherein the seed value is processed by a pseudorandom number generator routine.

26. (previously presented) The method of claim 25, wherein, based on the processing of the at least one seed value, musical data in accordance with the song data structure is provided for a complete song.

27. (previously presented) The method of claim 1, further comprising the steps of:

providing a radio tuner, wherein the radio tuner tunes in and provides as sound output audio information from one or a plurality of radio stations; and

defining one or a plurality of virtual radio stations, wherein each of the virtual radio stations corresponds to a particular one of the musical styles, wherein each of the plurality of virtual radio stations provides as sound output audio information comprising automatically generated music in accordance with the particular one of the musical styles that corresponds to the virtual radio station;

providing a radio/virtual radio user interface, wherein a user is presented with an option to select as sound output a radio station to which the radio tuner tunes or a virtual radio station;

in response to first user input selecting as sound output a radio station, providing audio output based on the audio information from one of the radio stations;

in response to second user input selecting as sound output a virtual radio station, providing audio output comprising automatically generated music in accordance with the particular one of the musical styles that corresponds to the virtual radio station.

28. (previously presented) The method of claim 11, further comprising the steps of:

providing a radio tuner, wherein the radio tuner tunes in and provides as sound output audio information from one or a plurality of radio stations; and

defining one or a plurality of virtual radio stations, wherein each of the virtual radio stations corresponds to a particular one of the musical styles, wherein each of the plurality of virtual radio stations provides as sound output audio information comprising automatically generated music in accordance with the particular one of the musical styles that corresponds to the virtual radio station;

providing a radio/virtual radio user interface, wherein a user is presented with an option to select as sound output a radio station to which the radio tuner tunes or a virtual radio station;

in response to first user input selecting as sound output a radio station, providing audio output based on the audio information from one of the radio stations;

in response to second user input selecting as sound output a virtual radio station, providing audio output comprising automatically generated music in accordance with the particular one of the musical styles that corresponds to the virtual radio station.

29. (new) A method for providing on-hold music in a telephony device comprising the steps of:

providing at least one music generation engine in the telephony device, wherein the at least one music generation engine generates music of one of a plurality of styles of music;

receiving a telephone call from a caller;

wherein, when the caller is placed on-hold, controlling the at least one music generation engine to automatically compose on-hold music that is audibly provided to the caller;

wherein, in response to one or more first commands entered by a user, on-hold music of a particular style is selected by the user and the music generation engine is controlled so that the at least one music generation engine generates via autocomposition on-hold music of the particular style selected by the user.

30. (new) The method of claim 29, wherein the on-hold music of the particular style selected by the user is modified based on one or more second commands entered by

the user, wherein the at least one music generation engine is controlled so that the ~~at least~~ one music generation engine generates modified on-hold music of the particular style selected by the user based on the one or more second commands entered by the user.

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